

IN THE CLAIMS:

Please AMEND claims 1, 9, 14, 16, and 17, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1. (Currently Amended) An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said apparatus comprising:

a chamber;

a substituting unit for substituting a gas in said chamber from a first gas to the second gas;

a stage, provided in said chamber, which holds and moves the substrate;

a static pressure gas bearing, provided in said chamber, which supports said stage;

a gas supply unit for supplying the second gas to said static pressure gas bearing;

a control unit for controlling said gas supply unit to supply the second gas to said static pressure gas bearing when said substituting unit substitutes the gas in said chamber from the first gas to the second gas; and

a bearing exhaust unit for exhausting the gas of said static pressure gas bearing.

2. (Previously Presented) An apparatus according to claim 1, further comprising an evacuating unit for evacuating said chamber by exhausting the gas therefrom when substituting the gas in said chamber from the first gas to the second gas.

3. (Previously Presented) An apparatus according to claim 2, wherein said gas supply unit supplies the second gas to said static pressure gas bearing before a start of exhausting the gas in said chamber.

4. (Previously Presented) An apparatus according to claim 2, wherein said gas supply unit supplies the second gas to said static pressure gas bearing simultaneously with exhausting the gas in said chamber.

5. (Previously Presented) An apparatus according to claim 2, wherein said gas supply unit supplies the second gas to said static pressure gas bearing after a start of exhausting the gas in said chamber.

6. (Previously Presented) An apparatus according to claim 2, wherein said evacuating unit and the bearing exhaust unit are the same.

7. (Previously Presented) An apparatus according to claim 1, wherein the second gas is helium.

8. (Cancelled)

9. (Currently Amended) An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said apparatus comprising:

a chamber;

a substituting unit for exhausting a first gas from said chamber and introducing a the second gas into said chamber;

a stage, provided in said chamber, which holds and moves the substrate;

a static pressure gas bearing, provided in said chamber, which supports said stage;

a gas supply pipe for supplying a working gas to said static pressure gas bearing;

and

a bearing exhaust unit for exhausting a gas of said static pressure gas bearing through said gas supply pipe.

10. (Previously Presented) An apparatus according to claim 9, wherein the second gas is helium.

11. (Cancelled)

12. (Previously Presented) An exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, said apparatus comprising:

a chamber;

a positioning unit provided in said chamber to position the substrate;

a substituting unit for substituting the second gas for a first gas in said chamber;
a static pressure gas bearing, provided in said chamber, for supporting said
positioning unit;
a gas supply unit for supplying a working gas to said static pressure gas bearing;
a control unit for controlling said gas supply unit to supply the second gas to said
static pressure gas bearing when substituting the gas in said chamber from the first gas to the
second gas; and
a bearing exhaust unit for exhausting the gas of said static pressure gas bearing.

13. (Previously Presented) An apparatus according to claim 12, wherein said exposure
apparatus is an X-ray exposure apparatus employing a synchrotron radiation beam as an exposure
beam.

14. (Currently Amended) An exposure apparatus for exposing a substrate to a pattern in
an atmosphere of a second gas, said apparatus comprising:

a chamber;
a positioning unit provided in said chamber to position a the substrate;
a substituting unit for exhausting a first gas from said chamber and introducing
the second gas into said chamber;
a static pressure gas bearing, provided in said chamber, for supporting said
positioning unit;

a gas supply pipe for supplying a working gas to said static pressure gas bearing;
and
a bearing exhaust unit for exhausting a gas in said static pressure gas bearing
through said gas supply pipe.

15. (Previously Presented) An apparatus according to claim 14, wherein said exposure apparatus is an X-ray exposure apparatus using a synchrotron radiation beam as an exposure beam.

16. (Previously Presented) An atmosphere substituting method of substituting an atmosphere in a chamber of an exposure apparatus for exposing a substrate to a pattern in an atmosphere of a second gas, the exposure apparatus having a stage, provided in the chamber, which holds and moves the substrate, and a static pressure gas bearing, provided in the chamber, which supports the stage, said method comprising:

a substituting step of substituting a gas in the chamber from a first gas to the second gas;

a bearing exhaust step of exhausting, during said substituting step, the first gas of a the static pressure gas bearing in the chamber; and

a gas supply step of supplying the second gas to the static pressure gas bearing with a gas supply unit.

17. (Currently Amended) A method according to claim 16, further comprising an evacuating step of evacuating ~~said~~ the chamber by exhausting the gas therefrom when substituting the gas in ~~said~~ the chamber from the first gas to the second gas.

18. (Previously Presented) A method according to claim 17, wherein the second gas is supplied in said gas supply step before a start of exhausting the gas in said evacuating step.

19. (Previously Presented) A method according to claim 17, wherein the second gas is supplied in said gas supply step simultaneously with exhausting the gas in said evacuating step.

20. (Previously Presented) A method according to claim 17, wherein the second gas is supplied in said gas supply step after a start of exhausting the gas in said evacuating step.

21. (Cancelled)

22. (Previously Presented) A method according to claim 16, wherein the second gas is helium.

23. (Cancelled)

24. (Previously Presented) A device manufacturing method comprising a substituting step of substituting a gas in a chamber, incorporating a positioning apparatus supported by a static pressure gas bearing, from a first gas to a second gas, and an exposure step of positioning a substrate with the positioning apparatus and exposing the substrate to a pattern after said substituting step, said method comprising:

a bearing exhaust step of exhausting, during said substituting step, the first gas of the static pressure gas bearing; and

a gas supply step of supplying the second gas to the static pressure gas bearing with a gas supply unit.

25. (Previously Presented) A method according to claim 24, further comprising an evacuating step of evacuating the chamber by exhausting the gas therefrom when substituting the gas in said substituting step, wherein the second gas is supplied in said gas supply step before a start of, simultaneously with, or after a start of exhausting the gas in said evacuating step.

26. (Cancelled)

27. (Previously Presented) A method according to claim 24, wherein the gas is exhausted in said bearing exhaust step after the second gas is supplied in said gas supply step.

28. (Original) A method according to claim 25, wherein in said bearing exhaust step, the gas of the static pressure gas bearing is exhausted through a pipe connected thereto, the gas being exhausted simultaneously with exhausting in said evacuating step.

29. (Previously Presented) A method according to claim 28, wherein an exposure in said exposure step is performed by using a synchrotron radiation beam, and the second gas is helium.

30. (Previously Presented) A device manufacturing method comprising a substituting step of substituting a gas in a chamber, incorporating a positioning apparatus supported by a static pressure gas bearing, by exhausting a first gas from the chamber and introducing a second gas into the chamber, and an exposure step of positioning a substrate with the positioning apparatus and exposing the substrate to a pattern after said substituting step, said method comprising:

a bearing exhaust step of exhausting the gas of the static pressure gas bearing through a pipe connected thereto simultaneously with exhausting the gas in said substituting step.

31. (Previously Presented) A method according to claim 30, wherein an exposure in said exposure step is performed by using a synchrotron radiation beam, and the second gas is helium.